

I claim:

112
1. A convertible rongeur comprising
a front handle piece pivotably attached to a pivot point in a bottom shaft piece
having a tip portion and a handle portion,
engagement means whereby said front handle piece is being releaseably engaged
with a top shaft cutting piece so as to slideably advance and retract said top
shaft cutting piece relative to the tip portion of said bottom shaft piece when
said front handle piece is compressed relative to said handle portion of said
bottom shaft piece,
spring means to resist said compression and hold said front handle piece apart
from said handle portion of said bottom shaft piece,
wherein release means permits said top shaft cutting piece to open from the
front, to allow access for cleaning,
and wherein said top shaft, when so opened, remains attached by attachment
means to the remainder of the rongeur, so as to retain all parts of said
rongeur in one attached unit at all times.

2. [A] The rongeur as in claim 1, wherein said engagement means comprises a driving
slot in the top end of said front handle piece that engages a driving pin in said top shaft.

3. [A] The rongeur as in claim 2, wherein said release means comprises a retractable
mounting for said front handle piece, which when biased so as to retract said front han-
dle piece, permits said driving pin to unseat from said driving slot and slide over said top
end of said front handle piece.

4. [A] The rongeur as in claim 3, wherein said front handle can also be retracted so that
said driving pin may slide back over said top end of said front handle piece so as to re-
seat in said driving slot.

5. [A] The rongeur as in claim 1, wherein said attachment means comprises a metal link
pivotally attached at one end thereof to the rear portion of said top shaft cutting piece
"and a central point on the top side" to of said bottom shaft piece.

6. [A] The rongeur as in claims 3 or 4, wherein said driving slot is positioned so as to
slant rearward at the top at an angle of approximately 14 degrees from the vertical, and

wherein said front handle piece comprises a radius and a ramp to the rear of said slot so as to facilitate the sliding of said driving pin over said top end of said front handle piece.

7. [A] The rongeur as in claim 3, wherein said spring means comprise two elongated spring pieces each having a top and bottom end, the bottom ends of which are attached, respectively, to said front handle piece and said handle portion of said bottom shaft piece, and the top ends of which are rotatably or hingably joined together in a manner such that said springs do not readily detach from each other when said front handle piece is loosened or retracted.

8. A convertible rongeur comprising
a front handle piece;

a bottom shaft piece moveably attached to said front handle piece, said bottom shaft piece having a tip portion and a handle portion, said front handle piece being compressed toward said handle portion of said bottom shaft piece to operate said rongeur; and

a top shaft cutting piece moveably engaged with said tip portion of said bottom shaft piece, said top shaft cutting piece being disengageable with said tip portion of said bottom shaft piece;

wherein, when said top shaft cutting piece is disengaged from said tip portion of said bottom shaft piece, said top shaft cutting piece remains attached to said rongeur so as to retain all parts of said rongeur in one attached unit.